

## Refine Search

### Search Results -

Terms	Documents
L2 and complex	1

Database:

US Pre-Grant Publication Full-Text Database  
US Patents Full-Text Database  
US OCR Full-Text Database  
EPO Abstracts Database  
JPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

Search:

L3

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### Search History

DATE: Wednesday, June 21, 2006 [Printable Copy](#) [Create Case](#)

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>			
<u>L3</u>	L2 and complex	1	<u>L3</u>
<u>L2</u>	L1 and metal	14	<u>L2</u>
<u>L1</u>	562/\$ and hydroxycitric acid	18	<u>L1</u>

END OF SEARCH HISTORY

## Hit List

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Search Results - Record(s) 1 through 10 of 14 returned.

☐ 1. Document ID: US 20060106101 A1

L2: Entry 1 of 14

File: PGPB

May 18, 2006

PGPUB-DOCUMENT-NUMBER: 20060106101

PGPUB-FILING-TYPE:

DOCUMENT-IDENTIFIER: US 20060106101 A1

TITLE: New double salts of (-)-hydroxycitric acid and a process for preparing the same

PUBLICATION-DATE: May 18, 2006

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Gokaraju; Ganga Raju	Andhra Pradesh		IN
Gokaraju; Rama Raju	Andhra Pradesh		IN
Gottumukkala; Venkata Subbaraju	Andhra Pradesh		IN
Somepalli; Venkateswarlu	Andhra Pradesh		IN

US-CL-CURRENT: 514/494; 514/574, 556/131, 562/582

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 2. Document ID: US 20050282904 A1

L2: Entry 2 of 14

File: PGPB

Dec 22, 2005

PGPUB-DOCUMENT-NUMBER: 20050282904

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050282904 A1

TITLE: Hydroxycitric acid compositions, pharmaceutical and dietary supplements and food products made therefrom, and methods for their use in reducing body weight

PUBLICATION-DATE: December 22, 2005

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Raju, G. Ganga	Labbipet		IN

US-CL-CURRENT: 514/574; 562/584

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 3. Document ID: US 20040229953 A1

L2: Entry 3 of 14

File: PGPB

Nov 18, 2004

PGPUB-DOCUMENT-NUMBER: 20040229953

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040229953 A1

TITLE: Process for preparing highly water soluble double salts of hydroxycitric acid particularly alkali and alkaline earth metal double salts

PUBLICATION-DATE: November 18, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Gokaraju, Ganga Raju	Andhra Pradesh		IN
Gokaraju, Rama Raju	Andhra Pradesh		IN
Gottumukkala, Venkata Subbaraju	Andhra Pradesh		IN
Pratha, Sridhar	Andhra Pradesh		IN

US-CL-CURRENT: 514/574; 562/584

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 4. Document ID: US 20030207942 A1

L2: Entry 4 of 14

File: PGPB

Nov 6, 2003

PGPUB-DOCUMENT-NUMBER: 20030207942

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030207942 A1

TITLE: Hydroxycitric acid salt composition and method of making

PUBLICATION-DATE: November 6, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Bhaskaran, Sunil	Wanorie	TX	IN
Mehta, Sevanti	Houston		US

US-CL-CURRENT: 514/574; 424/439, 562/580, 562/584

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 5. Document ID: US 6875891 B2

L2: Entry 5 of 14

File: USPT

Apr 5, 2005

US-PAT-NO: 6875891

DOCUMENT-IDENTIFIER: US 6875891 B2

TITLE: Process for preparing highly water soluble double salts of hydroxycitric acid particularly alkali and alkaline earth metal double salts

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw De
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☐ 6. Document ID: US 6395296 B1

L2: Entry 6 of 14

File: USPT

May 28, 2002

US-PAT-NO: 6395296

DOCUMENT-IDENTIFIER: US 6395296 B1

TITLE: Soluble double metal salt of group IA and IIA of hydroxycitric acid, process of preparing the same and its use in beverages and other food products without effecting their flavor and properties

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw De
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☐ 7. Document ID: US 6221901 B1

L2: Entry 7 of 14

File: USPT

Apr 24, 2001

US-PAT-NO: 6221901

DOCUMENT-IDENTIFIER: US 6221901 B1

TITLE: Magnesium (-)hydroxycitrate, method of preparation, applications, and compositions in particular pharmaceutical containing same

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw De
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☐ 8. Document ID: US 6160172 A

L2: Entry 8 of 14

File: USPT

Dec 12, 2000

US-PAT-NO: 6160172

DOCUMENT-IDENTIFIER: US 6160172 A

TITLE: Soluble double metal salt of group IA and IIA of (-) hydroxycitric acid, process of preparing the same and its use in beverages and other food products without effecting their flavor and properties

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw De
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☐ 9. Document ID: US 5656314 A

L2: Entry 9 of 14

File: USPT

Aug 12, 1997

US-PAT-NO: 5656314

DOCUMENT-IDENTIFIER: US 5656314 A

TITLE: Hydroxycitric acid concentrate and food products prepared therefrom

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 10. Document ID: US 5536516 A

L2: Entry 10 of 14

File: USPT

Jul 16, 1996

US-PAT-NO: 5536516

DOCUMENT-IDENTIFIER: US 5536516 A

TITLE: Hydroxycitric acid concentrate and food products prepared therefrom

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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Terms

Documents

L1 and metal

14

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## Hit List

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Search Results - Record(s) 11 through 14 of 14 returned.

☐ 11. Document ID: US 4443619 A

L2: Entry 11 of 14

File: USPT

Apr 17, 1984

US-PAT-NO: 4443619

DOCUMENT-IDENTIFIER: US 4443619 A

TITLE: Chlorocitric acids

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw De
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☐ 12. Document ID: US 4354039 A

L2: Entry 12 of 14

File: USPT

Oct 12, 1982

US-PAT-NO: 4354039

DOCUMENT-IDENTIFIER: US 4354039 A

TITLE: Chlorocitric acids

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw De
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☐ 13. Document ID: US 4340754 A

L2: Entry 13 of 14

File: USPT

Jul 20, 1982

US-PAT-NO: 4340754

DOCUMENT-IDENTIFIER: US 4340754 A

TITLE: Process for making chlorocitric acid

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw De
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☐ 14. Document ID: US 4312885 A

L2: Entry 14 of 14

File: USPT

Jan 26, 1982

US-PAT-NO: 4312885

DOCUMENT-IDENTIFIER: US 4312885 A

TITLE: Chlorocitric acids

(FILE 'HOME' ENTERED AT 17:15:10 ON 21 JUN 2006)

L1 FILE 'CAPLUS' ENTERED AT 17:15:24 ON 21 JUN 2006  
STRUCTURE UPLOADED  
S L1

L2 FILE 'REGISTRY' ENTERED AT 17:15:59 ON 21 JUN 2006  
98 S L1 FULL

L3 FILE 'CAPLUS' ENTERED AT 17:16:00 ON 21 JUN 2006  
273 S L2 FULL  
L4 11 S L3 AND ETHYL AND ESTER  
L5 3 S L4 AND PY<1999

L6 FILE 'CAPLUS' ENTERED AT 17:27:53 ON 21 JUN 2006  
STRUCTURE UPLOADED  
S L1

L7 FILE 'REGISTRY' ENTERED AT 17:28:12 ON 21 JUN 2006  
98 S L1 FULL

L8 FILE 'CAPLUS' ENTERED AT 17:28:13 ON 21 JUN 2006  
273 S L7 FULL  
S L6

L9 FILE 'REGISTRY' ENTERED AT 17:28:25 ON 21 JUN 2006  
621 S L6 FULL

L10 FILE 'CAPLUS' ENTERED AT 17:28:27 ON 21 JUN 2006  
110 S L9 FULL  
L11 1 S L10 AND METAL  
L12 2 S L10 AND COMPLEX

L13 FILE 'REGISTRY' ENTERED AT 17:31:11 ON 21 JUN 2006  
2 S HYDROXYCITRIC ACID/CN

FILE 'CAPLUS' ENTERED AT 17:32:01 ON 21 JUN 2006

FILE 'CAPLUS' ENTERED AT 17:32:52 ON 21 JUN 2006  
L14 10 S 27750-10-3/PUR  
L15 12 S 27750-10-3/PROC  
L16 20 S 27750-10-3/PREP  
L17 3 S 6205-14-7/PREP  
L18 0 S 6205-14-7/PUR  
L19 3 S 6205-14-7/PROC  
L20 37 S L14 OR L15 OR L16 OR L17 OR L19  
L21 7 S L20 AND METAL  
L22 0 S L20 AND METAL COMPLEX  
L23 4 S L21 AND PY<2003

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=> d 1-4 ibib abs hitstr

L23 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:425706 CAPLUS  
DOCUMENT NUMBER: 140:388725  
TITLE: An ion-exchange process for enriching hydroxycitric acid extracted from rinds of the Garcinia species for use in preparing food products  
INVENTOR(S): Bhandari, Ashok Kumar; Ravindranath, Bhagavathula; Moffett, Alex  
PATENT ASSIGNEE(S): Vittal Mallya Scientific Research Foundation, India; Renaissance Herbs, Inc.  
SOURCE: Indian, 17 pp.  
CODEN: INXXAP  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 178298	A	19970322	IN 1994-MA814	19940826 <--

PRIORITY APPLN. INFO.: IN 1994-MA814 19940826

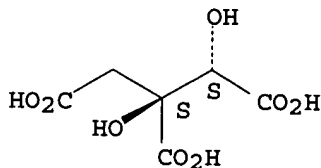
AB A process of preparing hydroxycitric acid from Garcinia rind for use in preparing food products comprises: obtaining a salt-free water extract of the Garcinia species rind loading 100-125% of the extract into an anion-exchange column for adsorption of hydrocitric acid on to the anion exchanger; eluting the hydrocitric acid from the anion-exchange column with an alkali (e.g., sodium hydroxide) for release of the hydroxycitric acid as a Group IA metal salt solution; and loading 50-90% of this alkali- and anion-exchanger-treated solution into a cation-exchange column for collection of the hydroxycitric acid as a free acid solution

IT 27750-10-3P, Hydroxycitric acid  
RL: CPS (Chemical process); FFD (Food or feed use); NPO (Natural product occurrence); PEP (Physical, engineering or chemical process); **PUR (Purification or recovery)**; PYP (Physical process); BIOL (Biological study); OCCU (Occurrence); **PREP (Preparation)**; **PROC (Process)**; USES (Uses)  
(ion-exchange process for enriching hydroxycitric acid extracted from rinds of the Garcinia species for use in preparing food products)

RN 27750-10-3 CAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L23 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:70251 CAPLUS  
DOCUMENT NUMBER: 140:99583  
TITLE: Novel process for the extraction of hydroxycitric acid from fruit rind of Garcinia species  
INVENTOR(S): Sharma, Nina; Parashuraman, Meena; Raman, Girija  
PATENT ASSIGNEE(S): Lupin Laboratories Limited, India  
SOURCE: Indian, 20 pp.



DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

CODEN: INXXAP

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 181839	A	19981003	IN 1996-BO542	19961111 <--
			IN 1996-BO542	19961111

PRIORITY APPLN. INFO.:

AB A process is described for the extraction of calcium hydroxycitrate from the fruit rind of *Garcinia cambogia*, *G. indica* and *G. atroviridis*. An aqueous suspension of *Garcinia* rind was treated with a catalytic amount of polygalacturonase and pectin lyase at 30-50°. Sodium hydroxide was added to obtain an intermediate alkali metal salt of hydroxycitric acid and achieve a pH of 8-9. Calcium chloride was added to precipitate the corresponding calcium salt. The calcium salt of (-)-erythro-hydroxycitric acid is an active inhibitor of fat formation.

IT 27750-10-3

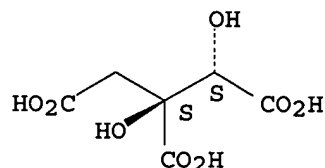
RL: NPO (Natural product occurrence); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)

(extraction of hydroxycitric acid from fruit rind of *Garcinia* species)

RN 27750-10-3 CAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L23 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:875764 CAPLUS

DOCUMENT NUMBER: 134:28742

TITLE: Soluble double metal salt of group IA and IIA of (-)-hydroxycitric acid, process of preparing the same and its use in beverages and other food products without effecting their flavor and properties  
 INVENTOR(S): Balasubramanyam, Karanam; Chandrasekhar, Bhaskaran; Ramadoss, Candadai Seshadri; Rao, Pillarisetti Venkata Subba

PATENT ASSIGNEE(S): Vittal Mallya Scientific Research Foundation, India  
 SOURCE: U.S., 5 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent  
 LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6160172	A	20001212	US 1998-59354	19980414 <--
IN 182487	A	19990417	IN 1997-MA1880	19970827 <--
IN 182488	A	19990417	IN 1997-MA1881	19970827 <--
IN 182489	A	19990417	IN 1997-MA1985	19970908 <--
IN 182490	A	19990417	IN 1997-MA1986	19970908 <--
IN 182810	A	19990724	IN 1997-MA1987	19970908 <--

IN 183849	A	20000429	IN 1998-MA2416	19981028 <--
US 6395296	B1	20020528	US 2000-637085	20000811 <--
PRIORITY APPLN. INFO.:			IN 1997-MA1880	A 19970827
			IN 1997-MA1881	A 19970827
			IN 1997-MA1985	A 19970908
			IN 1997-MA1986	A 19970908
			IN 1997-MA1987	A 19970908
			US 1998-59354	A3 19980414

AB The present invention is directed to a new soluble double **metal** salt of group IA and IIA of (-)-hydroxycitric acid of general formula I: where X is IA group **metal**: Li or Na or K or Rb or Cs or Fr where Y is IIA group **metal**: Be or Mg or Ca or Sr or Ba or Ra where the concentration of X in the salt varies from 1.5-51.0%, the concentration of Y in the

salts varies from 2.0-50.9%, the concentration of HCA in the salt varies from 31.0-93.0% depending on the nature of X and Y. This invention more particularly relates to new soluble double **metal** salt of group IA and IIA of (-)-hydroxycitric acid of general formula II. This invention also includes a process of preparing the soluble double **metal** salt of group IA and IIA of (-)-hydroxycitric acid of general formula I comprising: preparing (-)-hydroxycitric acid liquid concentrate/solid lactone

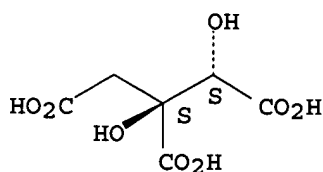
of hydroxycitric acid from Garcinia extract, neutralizing the free (-)-hydroxycitric acid present in the said (-)-hydroxycitric acid liquid concentrate/solid lactone (-)-hydroxycitric acid with group IA **metal** hydroxides, displacing partially the group IA **metal** ions in the above salt solns. by adding group IIA **metal** chlorides to form soluble double **metal** salt of group IA and IIA of (-)-hydroxycitric acid, precipitating the said double **metal** salt of group IA & IIA of (-)-hydroxycitric acid by adding aqueous polar solvent to get soluble IIA **metal** salt of (-)-hydroxycitric acid or obtaining the soluble double **metal** salt as powder by spray drying prior to the solvent addition or spray drying water solubilized solvent precipitated material. The instant invention also discloses the use of the said soluble double **metal** salt of group IA and IIA of (-)-hydroxycitric acid of formula I and particularly formula II in beverages and other food products and its use in beverages and other food products.

IT 27750-10-3DP, (-)-Hydroxycitric acid, double **metal** salts  
 RL: FFD (Food or feed use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (soluble double **metal** salt of group IA and IIA of (-)-hydroxycitric acid, process of preparing the same and its use in beverages and other food products without effecting their flavor and properties)

RN 27750-10-3 CAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

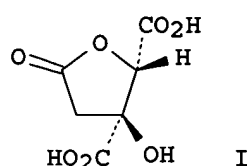
ACCESSION NUMBER: 2000:802411 CAPLUS

DOCUMENT NUMBER: 133:335435

TITLE: Method for the large-scale isolation of garcinia acid

INVENTOR(S): Ibnusaud, Ibrahim; Puthiaparampil, Tom Thomas; Thomas, Beena  
 PATENT ASSIGNEE(S): Department of Science and Technology, Government of India, India  
 SOURCE: U.S., 7 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6147228	A	20001114	US 1999-365301	19990730 <--
IN 190387	A	20030726	IN 1998-DE2248	19980803
PRIORITY APPLN. INFO.: GI			IN 1998-DE2248	A 19980803



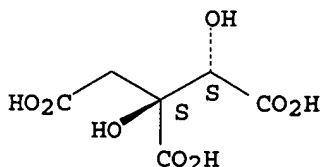
AB A process for the isolation of garcinia acid (I) from the fresh or dried rinds of the fruits of *Garcinia indica*, *Garcinia cambogia*, and/or *Garcinia atroviridis*, comprises: (a) subjecting the rinds to extraction to form an extract;  
 (b) adding a solvent (e.g., methanol) to the extract to remove pectin and form a filtrate; (c) converting the filtrate to an alkali salt (e.g., the disodium salt using aqueous sodium hydroxide); (d) neutralizing the alkali salt with an acid (e.g., aqueous hydrochloric acid), followed by evaporation, to form a concentrate; (e) purifying said concentrate using a solvent (e.g., methanol) to remove inorg. matter as impurities, to form a second filtrate; (f) concentrating the second filtrate to yield a crude Garcinia acid; and (g) recrystg. the crude to form pure crystals of garcinia acid I (optical rotation  $[\alpha]_{D20} = +102.151^\circ$ ).

IT 27750-10-3P, Garcinia acid  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); IMF (Industrial manufacture); **PUR (Purification or recovery)**; RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); OCCU (Occurrence); **PREP (Preparation)**; RACT (Reactant or reagent)  
 (method for the large-scale isolation of garcinia acid)

RN 27750-10-3 CAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS

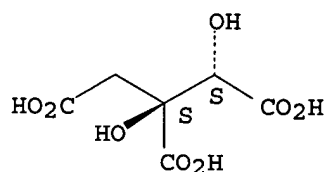
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s hydroxycitric acid/cn  
L13 2 HYDROXYCITRIC ACID/CN

=> d

L13 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 27750-10-3 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN (-)-2-Hydroxycitric acid  
CN (-)-Hydroxycitric acid  
CN Citric acid, 2-hydroxy-, (-)-  
CN Garcinia acid  
CN **Hydroxycitric acid**  
CN Super CitriMax HCA 600SXS  
FS STEREOSEARCH  
DR 4373-35-7  
MF C6 H8 O8  
CI COM  
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*, BIOSIS, BIOTECHNO,  
CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CIN, DDFU, DRUGU, EMBASE, IPA,  
NAPRALERT, PROMT, RTECS\*, TOXCENTER, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)

Absolute stereochemistry. Rotation (-).

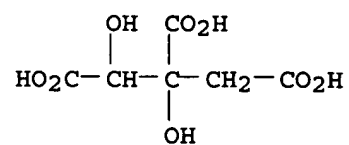


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

231 REFERENCES IN FILE CA (1907 TO DATE)  
28 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
233 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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L13 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 6205-14-7 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Pentaric acid, 3-C-carboxy-2-deoxy- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 1,2,3-Propanetricarboxylic acid, 1,2-dihydroxy- (7CI, 8CI)  
OTHER NAMES:  
CN **Hydroxycitric acid**  
CN Regulator  
FS 3D CONCORD  
MF C6 H8 O8  
CI COM  
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*, BIOSIS, BIOTECHNO,  
CA, CAOLD, CAPLUS, CBNB, CHEMCATS, CIN, CSCHM, CSNB, EMBASE, MEDLINE,  
PIRA, PROMT, TOXCENTER, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

30 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 30 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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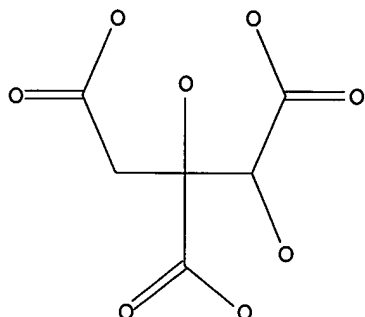
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L6           STRUCTURE UPLOADED

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L6 HAS NO ANSWERS

L6                   STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 full

**REGISTRY INITIATED**

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 17:28:12 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 38025 TO ITERATE

100.0% PROCESSED 38025 ITERATIONS  
SEARCH TIME: 00.00.01

98 ANSWERS

L7           98 SEA SSS FUL L1

L8           273 L7

=> s l6 full

**REGISTRY INITIATED**

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 17:28:25 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 194094 TO ITERATE

100.0% PROCESSED 194094 ITERATIONS  
SEARCH TIME: 00.00.01

621 ANSWERS

L9           621 SEA SSS FUL L6

L10 110 L9

=> s 110 and metal  
1653784 METAL

L11 1 L10 AND METAL

=> d ibib abs hitstr

L11 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:557127 CAPLUS

DOCUMENT NUMBER: 115:157127

TITLE: Cinatrin derivatives as phospholipase A2 inhibitors  
and their manufacture with Circinotrichum  
falcatisporum

INVENTOR(S): Yoshida, Tadashi; Arita, Hitoshi; Matsumoto, Koichi;  
Itazaki, Hiroshi; Kawamura, Yoshimi

PATENT ASSIGNEE(S): Shionogi and Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 27 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

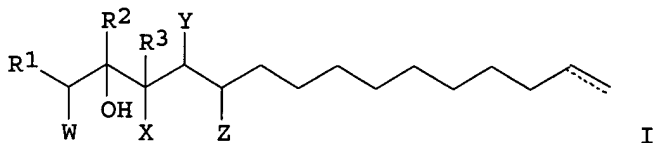
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 405864	A2	19910102	EP 1990-306872	19900622
EP 405864	A3	19920108		
EP 405864	B1	19950412		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 03108490	A2	19910508	JP 1990-148007	19900606
AT 121091	E	19950415	AT 1990-306872	19900622
ES 2073529	T3	19950816	ES 1990-306872	19900622
US 5099034	A	19920324	US 1990-544673	19900627
US 5120647	A	19920609	US 1990-617882	19901126
PRIORITY APPLN. INFO.:			JP 1989-170396	A 19890630
			US 1990-544673	A3 19900627

OTHER SOURCE(S): MARPAT 115:157127

GI



AB Cinatrin and its derivs. I (R1, R2, R3 = CO2R4, CO2R5, CO2R6 resp.; R4, R5, R6 = H, lower alkaline, alkaline metal; W, Y, Z = H; W/R3, X/R1, and/or Z/R3 may be combined together to form a lactone, an ester, or salt thereof) are manufacture by fermentation with Circinotrichum falcatisporum with optional hydrolysis and/or esterification. Cinatrin A, B, C2, and C3 were isolated from the fermentation broth of C. falcatisporum. Chemical preparation of

their Me esters and seco acid Na salts were also shown. Most chemical modified derivs. were more effective as phospholipase A2 inhibitors.

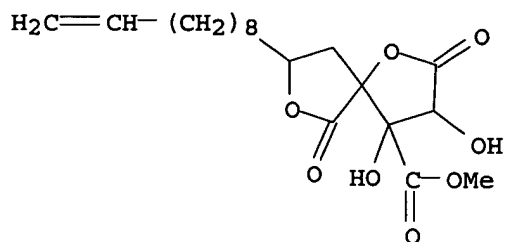
IT 136266-38-1P 136266-39-2P 136266-41-6P

RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)

(manufacture of, from precursor from Circinotrichum falcatisporum, as phospholipase A2 inhibitor)

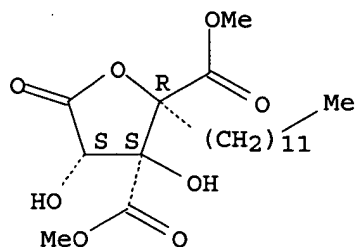


RN 136266-38-1 CAPLUS  
 CN 1,7-Dioxaspiro[4.4]nonane-4-carboxylic acid, 8-(9-decenyl)-3,4-dihydroxy-2,6-dioxo-, methyl ester (9CI) (CA INDEX NAME)

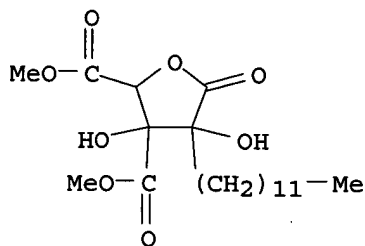


RN 136266-39-2 CAPLUS  
 CN D-Xylaric acid, 2-C-dodecyl-3-C-(methoxycarbonyl)-, -5,2-lactone, 1-methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 136266-41-6 CAPLUS  
 CN Pentaric acid, 2-C-dodecyl-3-C-(methoxycarbonyl)-, 1,4-lactone, 5-methyl ester (9CI) (CA INDEX NAME)

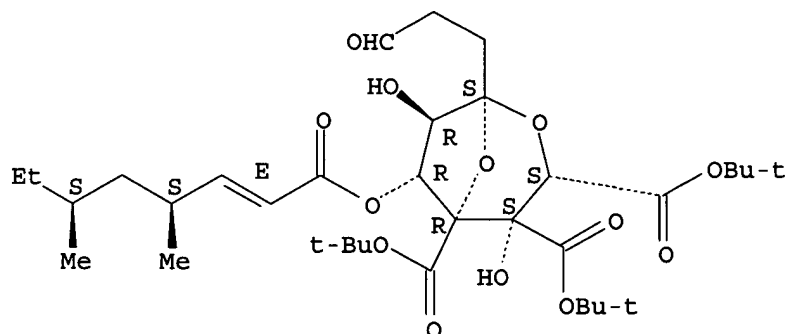


=> s l10 and complex  
 1265688 COMPLEX  
 L12 2 L10 AND COMPLEX  
 => d 1-2 ibib abs hitstr

L12 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2002:863840 CAPLUS  
 DOCUMENT NUMBER: 139:101162  
 TITLE: Product subclass 17: silyl ethers  
 AUTHOR(S): White, J. D.; Carter, R. G.  
 CORPORATE SOURCE: Dept. of Chemistry, Oregon State University,  
 Corvallis, OR, 97331, USA

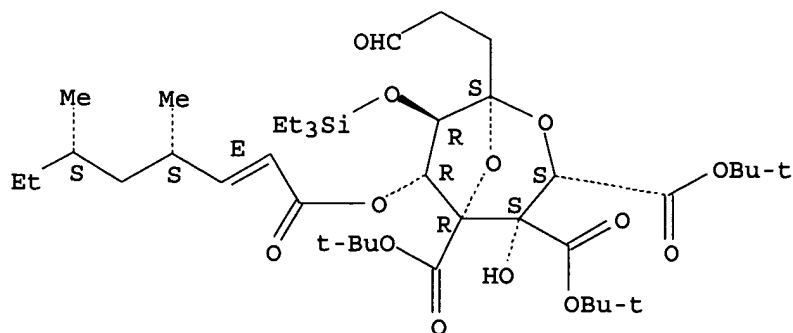
SOURCE: Science of Synthesis (2002), 4, 371-412  
 CODEN: SSCYJ9  
 PUBLISHER: Georg Thieme Verlag  
 DOCUMENT TYPE: Journal; General Review  
 LANGUAGE: English  
 AB A review of preparation and applications of silyl ethers. Covered reactions include silylations.  
 IT **146968-46-9**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of silyl ethers via silylation of alcs. with chlorotriethylsilane)  
 RN 146968-46-9 CAPLUS  
 CN D-glycero- $\beta$ -L-altro-4-Deculo-4,7-furanuronic acid, 4,9-anhydro-2,3-dideoxy-7,8-bis-C-[(1,1-dimethylethoxy)carbonyl]-, 1,1-dimethylethyl ester, 6-[(2E,4S,6S)-4,6-dimethyl-2-octenoate] (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).  
 Double bond geometry as shown.



IT **185201-17-6P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of silyl ethers via silylation of alcs. with chlorotriethylsilane)  
 RN 185201-17-6 CAPLUS  
 CN D-glycero- $\beta$ -L-altro-4-Deculo-4,7-furanuronic acid, 4,9-anhydro-2,3-dideoxy-7,8-bis-C-[(1,1-dimethylethoxy)carbonyl]-5-O-(triethylsilyl)-, 1,1-dimethylethyl ester, 6-[(2E,4S,6S)-4,6-dimethyl-2-octenoate] (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).  
 Double bond geometry as shown.



REFERENCE COUNT: 110 THERE ARE 110 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1962:60500 CAPLUS  
 DOCUMENT NUMBER: 56:60500  
 ORIGINAL REFERENCE NO.: 56:11530c-i  
 TITLE: Reactions of dicarbonyl compounds  
 AUTHOR(S): Cantlon, I. J.; Cocker, W.; McMurry, T. B. H.  
 CORPORATE SOURCE: Trinity Coll., Dublin, Ire.  
 SOURCE: Tetrahedron (1961), 15, 46-52  
 CODEN: TETRAB; ISSN: 0040-4020  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable

AB cf. CA 54, 7677g.-Finely powdered EtO<sub>2</sub>CC(ONa):CHCO<sub>2</sub>Et (I) (6 g.) shaken several hrs. with 5 g. EtO<sub>2</sub>CCHBrCOCO<sub>2</sub>Et (II) in 50 ml. Et<sub>2</sub>O and kept 16 hrs., the filtered solution evaporated and the residue washed with ice-cold Et<sub>2</sub>O

gave 30% tetraethyl 2,3-dihydro-3-hydroxyfurantetracarboxylate (III), m. 82-3°. II (5 g.) and 5 g. EtO<sub>2</sub>CCOCH<sub>2</sub>CO<sub>2</sub>Et in 10 ml. Et<sub>2</sub>O kept 16 hrs. at room temperature with freshly distilled dried C<sub>5</sub>H<sub>5</sub>N, the filtered solution

washed with dilute H<sub>2</sub>SO<sub>4</sub> and H<sub>2</sub>O, the residue on evaporation chilled and the crystalline product washed with ice-cold Et<sub>2</sub>O gave 0.25 g. III formed by a base-catalyzed reaction of II with the ester. Dehydration of III gave tetraethyl furantetracarboxylate, hydrolyzed to furantetracarboxylic acid (IV) and converted to the tetramethyl ester. BrCH<sub>2</sub>COCO<sub>2</sub>Et condensed with I gave triethyl 2,3-dihydro-3-hydroxyfurantricarboxylate (V), hydrolyzed to furan-2,3,4-tricarboxylic acid (VI), methylated to the trimethyl ester. Spectroscopic data showed that III and V could not possess the alternatively possible ethylene oxide structure. The nuclear magnetic resonance (n.m.r.) spectrum of III showed peaks at 4.88, 5.99 and complex bands at 8.66 p.p.m. supporting the assigned structure. Both III and V gave VI when refluxed with HCl and since IV was unaffected by HCl the decarboxylation of III must occur before formation of the furan. The probable mechanism was discussed and an explanation of the dehydration of III given. III was not reduced catalytically or by Zn-alc., Zn-AcOH, or Zn-AcOHAgNO<sub>3</sub>. The close proximity of the 4- and 5-ester groups hindered bromination. III (2 g.) heated 2 hrs. on a steam bath in 10 ml. 1:1 Ac<sub>2</sub>O-C<sub>5</sub>H<sub>5</sub>N, the mixture poured into 30 ml. ice-H<sub>2</sub>O and neutralized with Na<sub>2</sub>CO<sub>3</sub>, extracted with Et<sub>2</sub>O and the product chromatographed on 30 g. neutral Al<sub>2</sub>O<sub>3</sub>, eluted with C<sub>6</sub>H<sub>6</sub>-petr. ether and the eluate evaporated gave 0.4 g. IV tetraethyl ester, m. 34°. III (5 g.) in 100 ml. EtOAc ozonized at -78° (solid CO<sub>2</sub>) 8.5 hrs., the ozonide hydrogenated over Pd-C and the viscous liquid diluted to 15 ml. with alc., the solution (2 ml.) treated with 5 ml. NH<sub>4</sub>OH (d. 0.880) with evolution of heat and the violet mixture filtered gave 0.2 g. (CONH<sub>2</sub>)<sub>2</sub>. The alc. solution (13 ml.) saturated 2 min. with dry HCl, the mixture refluxed 30 min. and the solvent evaporated, the residue taken up in CHCl<sub>3</sub> and the H<sub>2</sub>O-washed and dried solution distilled yielded 0.75 g. (CO<sub>2</sub>Et)<sub>2</sub>. The reactions were consistent

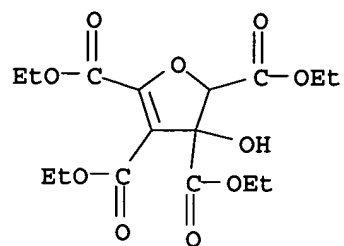
with

an ozonolysis product,  $\nu$  3500, 1745 cm.<sup>-1</sup> with the structure EtO<sub>2</sub>CCO<sub>2</sub>CH(CO<sub>2</sub>Et)C(OH)(CO<sub>2</sub>Et)COCO<sub>2</sub>Et but attempts to isolate a degradation product, HOCH(CO<sub>2</sub>Et)C(OH)(CO<sub>2</sub>Et)COCO<sub>2</sub>Et failed. III (500 mg.) in 5 ml Et<sub>2</sub>O kept 1 week in excess ethereal CH<sub>2</sub>N<sub>2</sub> gave a viscous liquid,  $\nu$  1540 cm.<sup>-1</sup>, assigned to an imidazoline C:N or N:N linkage. A mechanism for the formation of III was postulated and discussed. Attempts were made to condense bromodimedon with I but the only product was III in high yield. BrCH<sub>2</sub>COCH<sub>2</sub>CO<sub>2</sub>Et (from 50 g. AcCH<sub>2</sub>CO<sub>2</sub>Et) shaken 20 hrs. with excess I in Et<sub>2</sub>O, the filtered solution evaporated and the 1,4-dicarbethoxy-2,5-cyclohexanedione (4.3 g., m. 124-5°) treated with Ac<sub>2</sub>O-C<sub>5</sub>H<sub>5</sub>N gave the acetate, m. 170°.

IT 6307-27-3, 2,3,4,5-Furantetracarboxylic acid, 2,3-dihydro-3-hydroxy-, tetraethyl ester  
 (preparation of)

RN 6307-27-3 CAPLUS

CN Furantetracarboxylic acid, 2,3-dihydro-3-hydroxy-, tetraethyl ester (9CI)  
(CA INDEX NAME)



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